LOW-VOLTAGE HIGH-RESOLUTION EINSEL GUN

ABSTRACT OF THE INVENTION

A low voltage Einzel gun design maximizes the size of the second main lens to reduce spherical aberrations thereby reducing spot-size and improving focus quality. The gun's final accelerator electrode is formed as an internal conductive coating on the neck, which is connected to anode potential through an anode button. The jumper between the final and second accelerator electrodes is removed and the second accelerator electrode is connected through the high voltage stem pin to an external potential. Connection of the high voltage stem pin to anode potential defines an Einzel gun. The focus electrode is now connected to one of the low voltage stem pins. In a high voltage Einzel gun, connecting the second accelerator electrode and focus electrode to the high voltage and a low voltage stem pin, respectively, would cause arcing between the pins.